SANTA CRUZ BIOTECHNOLOGY, INC.

HNF-3α (Q-6): sc-101058

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

HNF-1 (α and β), HNF-3 (α, β and γ), HNF-4 (α and γ) and HNF-6 compose, in part, a homoeprotein family designated the hepatocyte nuclear factor family. The various HNF-1 isoforms regulate transcription of genes in the liver as well as in other tissues such as kidney, small intestine and thymus. HNF-3α, HNF-3β and HNF-3γ regulate the transcription of numerous hepatocyte genes in adult liver. HNF-3α and HNF-3β have also been shown to be involved in gastrulation events such as body axis formation. HNF-4α and HNF-4γ have been shown to be important for early embryo development. HNF-4α is expressed in liver, kidney, pancreas, small intestine, testis and colon; HNF-4γ is expressed in each of these tissues except liver. HNF-6 has been shown to bind to the promoter of HNF-3β, which indicates a potential role of HNF-6 in gut endoderm epithelial cell differentiation. Evidence suggests that HNF-6 may also be a transriptional activator for at least 22 other hepatocyte-enriched genes, including cytochrome P450 2C13 and α-1 antitrypsin.

CHROMOSOMAL LOCATION

Genetic locus: FOXA1 (human) mapping to 14q21.1; Foxa1 (mouse) mapping to 12 C1.

SOURCE

HNF-3α (Q-6) is a mouse monoclonal antibody raised against recombinant HNF-3α of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

HNF-3α (Q-6) is recommended for detection of HNF-3α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for HNF-3α siRNA (h): sc-37930, HNF-3α siRNA (m): sc-37931, HNF-3α shRNA Plasmid (h): sc-37930-SH, HNF-3α shRNA Plasmid (m): sc-37931-SH, HNF-3α shRNA (h) Lentiviral Particles: sc-37930-V and HNF-3α shRNA (m) Lentiviral Particles: sc-37931-V.

Molecular Weight of HNF-3α: 50 kDa.

Positive Controls: HNF-3α (h2): 293T Lysate: sc-128813, Hep G2 cell lysate: sc-2227 or HeLa nuclear extract: sc-2120.

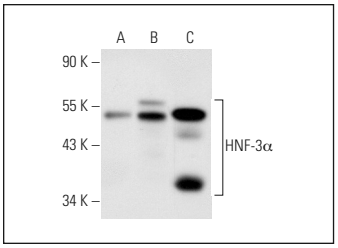
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

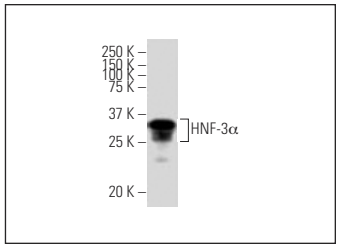
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



HNF-3α (Q-6): sc-101058. Western blot analysis of HNF-3α expression in non-transfected: sc-117752 (**A**) and human HNF-3α transfected: sc-128813 (**B**) 293T whole cell lysates and HeLa nuclear extract (**C**).



HNF-3α (Q-6): sc-101058. Western blot analysis of HNF-3α expression in Hep G2 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Somers, A., et al. 2010. Generation of transgene-free lung disease-specific human induced pluripotent stem cells using a single excisable lentiviral stem cell cassette. Stem Cells 28: 1728-1740.
2. Moya, M., et al. 2012. Foxa1 reduces lipid accumulation in human hepatocytes and is down-regulated in nonalcoholic fatty liver. PLoS ONE 7: e30014.
3. Guzman, C., et al. 2013. The human liver fatty acid binding protein (FABP1) gene is activated by FOXA1 and PPARα; and repressed by C/EBPα: implications in FABP1 down-regulation in nonalcoholic fatty liver disease. Biochim. Biophys. Acta 1831: 803-818.
4. Hosoda, M., et al. 2014. Differential expression of progesterone receptor, FOXA1, GATA3, and p53 between pre- and postmenopausal women with estrogen receptor-positive breast cancer. Breast Cancer Res. Treat. 144: 249-261.
5. Zhang, Y., et al. 2015. Involvement of aberrant miR-139/Jun feedback loop in human gastric cancer. Biochim. Biophys. Acta 1853: 481-488.
6. Ma, W., et al. 2016. The clinical significance of forkhead box protein A1 and its role in colorectal cancer. Mol. Med. Rep. 14: 2625-2631.
7. Fishwick, C., et al. 2017. Heterarchy of transcription factors driving basal and luminal cell phenotypes in human urothelium. Cell Death Differ. 24: 809-818.
8. Espinal, A.C., et al. 2017. FOXA1 hypermethylation: link between parity and ER-negative breast cancer in African American women? Breast Cancer Res. Treat. 166: 559-568.
9. Giadone, R.M., et al. 2018. A library of ATTR amyloidosis patient-specific induced pluripotent stem cells for disease modelling and *in vitro* testing of novel therapeutics. Amyloid 25: 148-155.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.